

REMARKS

Claims 1-20 are pending in the application (the "Application").

Claims 1-20 have been rejected.

Reconsideration and allowance of the pending claims is respectfully requested.

IDS

In Section 1 on Page 2 of the June 18, 2003, Office Action the Examiner informed the Applicant that the article "Recursive Search Block-Matching" as cited on the IDS filed April 24, 2001, failed to disclose the date of the reference. A new IDS is being submitted concurrently with this Response to provide complete identification of the publication. A second copy of the article is submitted herewith.

Drawings

In Section 2 on Page 2 of the Office Action the Examiner stated that Figures 5, 6A and 6B should be designated by a legend identifying the figures as "Prior Art." The Applicant has amended Figure 5, 6A and 6B to add a Prior Art legend. No new matter has been entered as a result of these amendments. A document entitled "Submission of Proposed Drawing Amendment" is being submitted concurrently with this Response to make the drawing corrections.

Specification

In Section 3 on Page 2 of the Office Action the Examiner objected to the disclosure because of an informality. The Specification has been amended to include a reference to Block 403 of Figure 4. No new matter has been added as a result of this amendment.

35 U.S.C. § 102(a) Anticipation

In Section 5 of the June 18, 2003 Office Action, the Examiner rejected Claims 1, 2, 4-6, 8-10, 12-14, 17 and 18 under 35 U.S.C. § 102(a) as being anticipated by de Haan et al of record, "True-Motion Estimation with 3-D Recursive Search Block Matching" (hereafter "*de Haan*"). The Applicant respectfully traverses the Examiner's assertion that the Applicant's invention has been anticipated by the *de Haan* reference. The Applicant respectfully requests the Examiner to withdraw the rejection of Claims 1, 2, 4-6, 8-10, 12-14, 17 and 18 in view of the Applicant's arguments.

It is axiomatic that a prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. MPEP § 2131. *See, In re King*, 231 USPQ 126, 138 (Fed. Cir. 1986) (citing with approval, *Lindemann Maschinenfabrik v. American Hoist and Derrick*, 221 USPQ 481, 485 (Fed. Cir. 1984)); *In re Bond*, 910 F.2d 831, 832, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990). Anticipation is only shown where each and every limitation of the claimed invention is found in a single prior art reference. MPEP § 2131. *In re Donohue*, 766 F.2d 531, 534, 226 USPQ 619, 621 (Fed. Cir. 1985).

With respect to amended independent Claims 1, 5, 9, 13 and 17, a determination of anticipation in accordance with Section 102 requires that each feature claimed therein be described in sufficient detail in *de Haan* to enable one of ordinary skill in the art to make and practice the claimed invention.

The Applicant respectfully disagrees with the Examiner's assertions regarding the subject matter disclosed in the *de Haan* reference. The Applicant respectfully submits that the *de Haan* reference does not show each and every limitation of the Applicant's invention. The Applicant directs the Examiner's attention to Claim 1, which contains unique and novel limitations:

1. For use in a receiver, a video enhancement mechanism for enhancing video information with spatio-temporal consistency comprising:

at least one enhancement unit enhancing a characteristic other than position of a selected pixel region of video information utilizing at least one candidate enhancement vector of enhancement algorithms to generate an enhanced pixel region for each candidate enhancement vector, each said enhanced pixel region equivalent to enhancement of said selected pixel region utilizing a respective candidate enhancement vector of enhancement algorithms; and

a selection unit computing an error for each said enhanced pixel region utilizing a bias towards spatio-temporal consistency of a respective enhanced pixel region with spatially adjacent pixel regions in a picture containing said selected pixel region and with a counterpart pixel region in one or more pictures successive with said picture containing said selected pixel region, said selection unit selecting an enhanced pixel region having a best enhancement for spatio-temporal consistency.

(Emphasis added).

The *de Haan* reference teaches a motion estimation algorithm. (*de Haan*, Abstract, first sentence). The algorithm is described as “a new motion estimation method specifically suitable for field rate conversion.” (*de Haan*, Section I). The operation of the 3-D recursive search of the *de Haan* reference is described as: “[t]he best candidate, selected with the SAD criterion, is assigned as the resulting displacement vector $\underline{D}(x,t)$ to all pixels in the block $B(\underline{X}) \dots$ ” (*de Haan*, Section IV, second sentence). As such, the *de Haan* reference teaches an algorithm that calculates a displacement vector to move pixels to a new position in an intermediate field when performing a field rate up-conversion from a lower field rate to a higher field rate. Thus, the *de Haan* reference does not teach an enhancement unit enhancing a characteristic other than position, as recited in Claim 1 of the Application.

The Applicant respectfully submits that amended Claim 1 is not anticipated by the *de Haan* reference. Therefore, the Applicant respectfully submits that the rejection of Claim 1 under 35 U.S.C. § 102(b) has been overcome.

The Applicant further notes that independent Claims 5, 9, 13 and 17 also recite the limitation of enhancing a characteristic other than position. For this reason independent Claims 5, 9, 13 and 17 are also patentable over the *de Haan* reference.

With respect to Claims 2, 4, 6, 8, 10, 12, 14 and 18 the Applicant notes that these claims depend directly or indirectly from independent Claims 1, 5, 9, 13 and 17. Therefore, Claims 2, 4, 6, 8, 10, 12, 14 and 18 also contain the same unique and novel claim limitations of independent Claims 1, 5, 9, 13 and 17 and are therefore patentable over the *de Haan* reference.

The Applicant respectfully submits that Claims 1, 2, 4-6, 8-10, 12-14, 17 and 18 are in condition for allowance. Allowance of Claims 1, 2, 4-6, 8-10, 12-14, 17 and 18 is respectfully requested.

35 U.S.C. § 103(a) Obviousness

In Section 7 of the June 18, 2003 Office Action, the Examiner rejected Claims 3, 7, 11, 15, 16, 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over the *de Haan* reference. The Applicant respectfully traverses the Examiner's assertion that the Applicant's invention is obvious in view of the *de Haan* reference. The Applicant respectfully requests the Examiner to withdraw the rejection of Claims 3, 7, 11, 15, 16, 19 and 20 in view of the Applicant's arguments.

During *ex parte* examinations of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of non-obviousness. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*,

977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 USPQ 870, 873 (Fed. Cir. 1985).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not be based on an applicant's disclosure. MPEP § 2142.

With respect to Claims 3, 7, 11, 15, 16, 19 and 20, the Applicants note that these claims depend directly or indirectly from independent Claims 1, 5, 9, 13 and 17. As previously described, independent Claims 1, 5, 9, 13 and 17 contain unique and novel claim limitations of the Applicants' invention not shown in the *de Haan* reference. Thus, Claims 3, 7, 11, 15, 16, 19 and 20 also contain the same unique and novel claim limitations of independent Claims 1, 5, 9, 13 and 17. The Applicant respectfully submits that the Patent Office has not established a *prima facie* case of obviousness with respect to Claims 3, 7, 11, 15, 16, 19 and 20 of the Applicant's invention, and that the rejection of the claims under 35 U.S.C. § 103(a) has thus been overcome.

The Applicant respectfully submits that Claims 3, 7, 11, 15, 16, 19 and 20 is in condition for allowance. Allowance of Claims 3, 7, 11, 15, 16, 19 and 20 is respectfully requested.

The Applicant's attorney has made the amendments and arguments set forth above in order to place this Application in condition for allowance. In the alternative, the Applicant's attorney has made the amendments and arguments to properly frame the issues for appeal. In this Amendment, the Applicant makes no admission concerning any now moot rejection or objection, and affirmatively denies any position, statement or averment of the Examiner that was not specifically addressed herein.

SUMMARY


For the reasons given above, the Applicants respectfully request reconsideration and allowance of pending claims and that this Application be passed to issue. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this Application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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